

Notice of Allowability

Application No.

10/808,534

Examiner

Roberta Prendergast

Applicant(s)

KIDERA, MASAYUKI

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/26/2006.
2. ☒ The allowed claim(s) is/are 1-7, 11-18, 22-28, 32-36, 40-46 and 50-57.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James J. Livingston on 1/3/2007. The application has been amended as follows:

The application has been amended as follows:

Independent claim 1, at line 11, after the phrase "...of polygons;" delete "and", at lines 14-16, after the phrase "...components of the arbitrary line, in the sorted order, wherein at the time when $LZ_{min} \Rightarrow PZ_{max}$, determination of whether or not the lines are hidden lines is avoided for polygons subsequent to the plurality of polygons sorted..." insert "...displaying the resulting three-dimensional model consisting of the polygons on a two-dimensional plane."

Independent claim 3, at line 16, after the phrase "...of polygons;" delete "and", at lines 19-21, after the phrase "...components of the arbitrary line, in the sorted order, wherein at the time when $LZ_{min} \Rightarrow PZ_{max}$, determination of whether or not the lines are hidden lines is avoided for polygons subsequent to the plurality of polygons sorted..." insert "...displaying the resulting three-dimensional model consisting of the polygons on a two-dimensional plane."

Drawings

Examiner acknowledges the amendment to the specification filed on 3/1/2006 correcting the errors that resulted in the objection to the drawings and therefore the objection to the drawings is hereby withdrawn.

Claim Rejections - 35 USC § 112

Applicant's arguments, see page 17, final paragraph, filed 9/26/2006, with respect to the rejection of claims 1-7, 11-18, 22-28, 32-36, 40-46, and 50-57 under 35 U.S.C. 112, first paragraph have been fully considered and are persuasive. The 35 U.S.C. 112, first paragraph rejection of claims 1-7, 11-18, 22-28, 32-36, 40-46, and 50-57 has been withdrawn.

Allowable Subject Matter

Claims 1-7, 11-18, 22-28, 32-36, 40-46, and 50-57 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 3, 22, 24, 40 and 42, cited prior art does not teach an apparatus, program and method for avoiding projection of lines hidden by a plurality of polygons in projecting a three-dimensional model consisting of the polygons onto a two-dimensional plane, the method comprising: obtaining the maximum value PZmax of the Z-axis direction component of each vertex in a viewpoint coordinate system for each of the plurality of polygons belonging to parts constituting the three-dimensional model; sorting the plurality of polygons in a descending order based on the

obtained maximum values PZ_{max} ; obtaining a value LZ_{min} that is the smaller of the Z-axis direction components in the viewpoint coordinate system of two (2) end points of an arbitrary line obtained from the plurality of polygons; and comparing the maximum value PZ_{max} of the Z-axis direction component of the plurality of polygons with the value LZ_{min} that is the smaller of the above obtained Z-axis direction components of the arbitrary line, in the sorted order, wherein at the time when $LZ_{min} > PZ_{max}$, determination of whether or not the lines are hidden lines is avoided for polygons subsequent to the plurality of polygons sorted.

Dependent claims 2, 4-7, 11-18, 23, 25-28, 32-36, 41, 43-46, and 50-57 depend from allowable claims 1, 3, 22, 24, 40 and 42 and are allowable for the reasons cited above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta Prendergast whose telephone number is (571) 272-7647. The examiner can normally be reached on M-F 7:00-4:00.

Art Unit: 2628

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RP 1/3/2007


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER